

RENEWABLE ENERGY RESOURCE INVESTIGATION

EXECUTIVE SUMMARY

On August 11, 1994, The Public Utilities Commission of the State of Hawaii (Commission) instituted an investigation to identify the policies, programs, procedures, and incentives needed for the successful implementation of renewable resource technologies in the State of Hawaii. The Commission named and admitted sixteen parties to the investigation docket. After meeting with the parties and conducting a series of workshops and discussion sessions, the Commission tasked the parties to engage in a consensus building process. The parties were asked to identify the barriers to renewable resource development in Hawaii and formulate specific strategies to remove these barriers.

In its Order No. 13849, filed April 10, 1995, the Commission stated that

"[t]he expected outcome of the consensus building process is a collaborative document which will outline the following:

- (1) All barriers, real or perceived, that impede the utilization of renewable energy resources in Hawaii;
- (2) Actual strategies to remove the barriers identified and deploy the utilization of renewable energy resources;
- (3) A list delineating strategies upon which the parties agree and disagree, and where agreement could not be reached, the reasons for disagreement and the extent to which compromise or alternative strategies were sought; and
- (4) Strategies that require further examination."

The Collaborative Document is the result of the consensus building process (collaborative) identified by the Commission. Included in this document is an outline and discussion of the real and perceived barriers and associated strategies identified by the participants in the collaborative. The identified barriers have been organized into related groups and the strategies addressing each barrier are identified.

Several strategies require further examination prior to implementation. For these strategies, studies, work groups or other preliminary activities are identified as vehicles to implement the strategies.

The Collaborative Document is not a consensus document and does not represent unanimous agreement by all parties. There is not agreement by all parties whether some of the barriers are real or are only perceived barriers. The degree of agreement regarding each barrier is identified in the discussion of each barrier. There is also no agreement regarding many of the strategies that are identified. In several places in the Collaborative Document the positions of each of the parties regarding each identified strategy are identified.

For each identified barrier and strategy where there is not agreement by the parties, a discussion is provided that briefly characterizes the positions of the proponents and opponents. The parties clarify their individual positions in the Statement of the Parties included at the end of the Collaborative Document.

The parties met in a series of facilitated meetings in order to reach agreement on the barriers and strategies. The parties attempted to reach compromise and identify alternative strategies. In addition to the facilitated meetings, all parties drafted several rounds of proposed text and comments regarding the proposed text. For each round of text and comments, copies were distributed by all parties, to all parties, for review.

A smaller group of individual participants was deputized by the collaborative to serve as a working group to consolidate the text into a uniform and coherent document. The working group produced a draft document that was circulated to all parties. Comments from the parties were then incorporated into a final draft which was reviewed and adopted by the collaborative group at the last facilitated meeting.

A matrix identifying each barrier, strategy and the positions of the parties is provided as a part of this Executive Summary. Each party was given the opportunity to state its agreement, disagreement or statement of no position regarding each strategy. The positions of the parties on the strategies take into account the discussion of the strategy in the Collaborative Document, as well as the title of the strategies reflected in the matrix. The positions of individual parties, including conditions they may have placed on their positions, are identified in more detail in the Statement of the Parties included at the end of the Collaborative Document.

Please note that a statement of "no position" for a strategy in the matrix does not necessarily mean that a party does not have a position regarding the strategy. For example, a statement of no position in the matrix may mean that a party may agree with only part of the wording of the strategy, that a position is only possible on a case by case basis, or that there is not sufficient information to take a definitive position at this time. Parties that are so inclined may elaborate on a "no position" vote in their position statements. Please refer to the discussion of the strategy in the text and each party's statement of position in the Statements of the Parties.

The parties participating in the Renewable Energy Resource Investigation, Docket No. 94-0226 are:

Division of Consumer Advocacy
County of Hawaii
County of Kauai
County of Maui
Department of Business, Economic Development & Tourism
Energy Resource Systems
Hawaii Electric Light Company, Inc.
Hawaii State Senate Committee on Science,
Technology and Economic Development
Hawaiian Commercial & Sugar Company
Hawaiian Electric Company, Inc.
Inter Island Solar Supply
Kahua Ranch, Ltd.
Kauai Electric Division of Citizens Utilities Company
Makani Uwila Power Corp.
Maui Electric Company, Limited
Pacific International Center for High Technology Research
Puna Geothermal Venture
RLA Consulting
David A. Rezacheck, Private Citizen
TRM/Wind Energy International, Inc.
Waimana Enterprises, Inc.
Zond Pacific, Inc.

barrier	strategy	vehicle	page	agency	agree	disagree	no position
1. current avoided cost offered to renewable developers may be insufficient			1-2				
1.a uncertainty regarding the applicability and availability of state income tax credits to re projects			1.a-1				
	1.a.1 seek clarification from dept. of taxation regarding applicability of existing credits to large re facilities	letter request	1.a-2	dbedt	heco, ke,d,ki,m,h,n,r,z		p,w,krl,i,ca,ers
	1.a.2 support and maintain existing re tax credits to the extent appropriate	monitor legislature	1.a-3	legislature	heco,ke,d,r,p,ki,m,h,w,n,krl,i,ers,z		ca
	1.a.3 examine efficacy of additional state incentives to encourage re	working group	1.a-4	dbedt, developers, utilities	heco, ke,d,r,p,ki, m, h,n,krl,i,ers,z		w,ca
1.b cost effectiveness of re resources			1.b-1				
	1.b.1 pursue the deployment of renewables that appear to be cost effective and monitor others	purchase power negotiations	1.b-1	utilities, developers, puc	heco,ke,d,p,ki,m,h,w,n,krl,i,ers,r,z		ca
	1.b.2 improve cost effectiveness of renewables through rd&d	see barrier grouping 9	1.b-2	see barrier grouping 9	heco,ke,d,ki,m,h,n,r,z		p,i,krl,w,ers,ca
	1.b.3 increase/refocus govt. tax incentives	see 1.a-3	1.b-2	dbedt led	heco,ke,d,n,r,z		p,krl,w,i,m,h,ers,ki,ca
	1.b.4 provide govt. support in addition to govt. tax incentives	see 1.c-3	1.b-3	utilities, dbedt	heco,ke,d,n,z		p,krl,w,i,m,k,h,ca,ki,ers
	1.b.5 green pricing	see 1.e-2	1.b-3	utilities, puc, advisory group	heco,ke,d,r,p,ki,m,h,n,krl,i,ca,ers,z	w	
	1.b.6 energy wheeling for counties	puc proceeding	1.b-4	puc,utilities,ca, counties	d,p,i,w,krl,h,ki,r,m,ers,z	heco, ke	ca
	1.b.7 net billing payment rates for small re systems	puc rule-making	1.b-5	puc	p,krl,i,ers,m,r,h,ki,d,z	heco, ke	ca
1.c unresolved avoided cost issues			1.c-1				
	1.c.1 reduce uncertainty regarding avoided costs	puc resolve pending dockets	1.c-2	puc	heco,ke,d,p,ki,m,h,w,n,krl,i,ers,r,z,ca		
	1.c.2 reasonably demonstrated avoided capacity costs for as available renewables	irp process, purchase power contract negotiations	1.c-3	puc, utilities, developers	heco,ke,d,p,ki,m,h,w,n,krl,ers,ca,i,z		
	1.c.3 perform an analysis of the combined effects of distributed re projects in a given service territory	computer model	1.c-4	utilities, dbedt	z,heco,ke,d,ki,m,h,n,ca,r		w,p,i,krl,ers
1.d current fuel adjustment clause passes on risk of oil price variability to consumers			1.d-1				
	1.d.1 puc eliminate ecac on a forward going basis	puc rulemaking	1.d-2	puc	d,p,krl,i,z	heco, ke,ki, m,n,ca	h,w,ers,r

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
		1.d.2	conduct analysis on a system to "flatten" risk of oil price variability	workgroup	1.d-3	dbedt	ke,d,r,z	heco, ca	n,ki,m,h,w,p,i,krl,ers
1.e	evaluation and consideration of beneficial impacts of renewable energy use				1.e-1				
		1.e.1	require utilities to pay an externalities adder above avoided cost	externalities adder	1.e-3	puc	d,p,w,n,krl,i,ers,z	heco, ke,h	ki,m,r,ca
		1.e.2	green pricing	green pricing utility tariff	1.e-4	utilities, puc, advisory group	heco, ke, d,r,p,ki,m,h,n,krl,i,z,ca	w	
		1.e.3	consider a production incentive for re developers funded by utility surcharge	analysis of potential costs of such a fund	1.e-7	dbedt, utilities, developers, puc	d,n,i,p,krl,ers,r,z	heco, ke	w,ki,m,h,ca
1.f	inability of utility system operation models and economic models to accurately and adequately model and evaluate re systems				1.f-1				
		1.f.1	puc resolve docket 7310	puc docket 7310	1.f-3	puc	heco,ke,d,p,ki,m,h,w,n,krl,i,r,ca,ers,z		
		1.f.2	consider modeling conventions and generation expansion criteria that are sensitive to the contribution of as-available generation	generation capacity criteria, irp process, ppa contract negotiations	1.f-4	utilities, puc, developers, ca, dbedt, pchtr, nrel, epri	heco,d,p,ki,m,h,n,i,ke,ers,w,ca,r,krl,z		
	2. apparent limitations on the amount of re power that can be accommodated by the electric utilities				2-2				
2.a	minimum load conditions leading to curtailment				2.a-1				
		2.a.1	dsm programs that shift load off-peak	utility irp process, dsm program design	2.a-3	utilities	heco,ke,d,ki,m,h,n,i,ca,ers,r,z		p,w,krl
		2.a.2	study and possible implementation of energy storage systems	utility irp process	2.a-4	utilities	heco,d,ki,m,h,n,r,ca,w,z		p,i,krl,ers,ke
2.b	intermittency of some re resources				2.b-1				
		2.b.1	reanalyze amounts of intermittent re power that utilities can absorb	report on limitations on penetration of intermittent power	2.b-1	utilities, developers	heco,ke,d,ki,m,h,n,r,ca,z		p,w,i,krl,ers
		2.b.2	study and consider implementation of energy storage systems	utility irp process and action plans	2.b-2	utilities, dbedt, developers	heco,d,ki,m,h,n,z,r,ca		p,w,i,krl,ers,ke
2.c	need to integrate technology with the grid				2.c-1				

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
		2.c.1	reanalyze the amount of re intermittent power that can be absorbed	see 2.b.1	2.c-1	utilities, developers	heco,ke,d,ki,m,h,n,r,ca,z		p,w,i,kri,ers
		2.c.2	analyze potential for niche applications for renewable resources	helco pv program	2.c-2	helco	heco,ke,d,ki,m,h,n,r,ca,z		p,w,i,kri,ers
		2.c.3	study and implement energy storage systems	see 2.b.2	2.c-2	utilities, dbedt, developers	heco,d,ki,m,h,n,r,ca,z		p,w,i,kri,ke,ers
	3. complex and lengthy permitting process; and limited land availability				3-1				
3.a	complex and lengthy permitting process				3.a-1				
		3.a.1	amend hrs 201, part IV, the permit facilitation act of 1985	legislative amendment	3.a-3	legislature, dbedt	d,r,p,n,kri,i,ers,z		heco,w,ke,ki,h,m,ca
		3.a.2	fund consolidated application permitting process and permit facilitation acts	administrative budget request	3.a-4	legislature, administration	heco,ke,d,r,n,z		p,w,i,kri,ers,m,h,ki,ca
		3.a.3	create a hawaii energy commission	legislation	3.a-6	legislature	r,n,i,z	heco,d,ki,m,h,	ke,p,w,kri,ers,ca
		3.a.4	consider reducing the number of agencies with permitting authority over re projects	dbedt working group	3.a-9	dbedt, utilities, developers, counties, legislature	heco,ke,d,r,n,z		p,kri,i,w,ki,m,h,ca,ers
		3.a.5	provide additional resources for permitting agencies	administration budget request and appropriations from legislature	3.a-10	administration legislature	heco,ke,r,n,z	ki,m,h	d,p,i,kri,w,ers,ca
		3.a.6	establish re subzones and enterprise zones	dbedt led working group	3.a-11	dbedt, utilities, developers, counties	heco,d,r,n,z	ki,m,h	p,i,kri,w,ers,ke,ca
		3.a.7	special rules for permitting small projects	dbedt led working group	3.a-13	dbedt, osp, utilities, developers, permitting agencies, legislature	heco,d,r,ki,m,h,n,z	ke	w,p,i,kri,ers,ca
3.b	limited availability of land								
		3.b.1	establish re subzones and enterprise zones	dbedt led working group	3.b-1	dbedt, utilities, developers, counties	heco,d,r,n,z	ki,m,h	p,i,kri,w,ers,ke,ca
		3.b.2	develop a re bidding process for access to state lands	working group	3.b-2	dlnr, dbedt, utilities, developers, government agencies	d,r,ki,m,h,n,z		heco,ke,w,p,i,kri,ers,ca

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
3.c.	developers may not be granted access to public lands or renewable energy resources				3.c-1				
		3.c.1	develop a re bidding process for access to state lands	working group	3.c-2	dlnr, dbedt, utilities, developers, government agencies	d,r,ki,m,h,n		heco,ke,w,p,i,krl,ers,ca
		3.c.2	enact legislation to ensure solar access for project term	study by hsea	3.c-4	legislature, counties, hsea	d,r,n,i		w,m,ki,h,p,krl,ers,ca,ke,heco
3.d.	nimby syndrome for siting re projects				3.d-1				
		3.d.1	involve public and public advocates early in the energy planning process	irp advisory groups	3.d-1	utilities, puc, ca, dbedt, dlnr	ke,d,r,ki,m,h,n,z		p,i,krl,w,heco,ers,ca
		3.d.2	educate the public about the net benefits of re projects and conservation	re public information media	3.d-3	puc, dbedt, ca, utilities, developers	heco,ke,d,r,ki,m,h,n,z		p,i,krl,w,ers,ca
		3.d.3	location of projects with significant potential impacts as remotely as possible	dbedt led working group	3.d-4	osp, dbedt, dlnr, utilities, developers, permitting agencies, counties, legislature	heco,ke,d,r,ki,m,h,n,z		p,i,krl,w,n,ca
		3.d.4	financial assistance to participants in advisory groups	advisory group meetings during non-business hours	3.d-5	puc, ca, utilities, legislature	ki,m,h,p,krl,i,ers,r,z	heco,ke	d,w,n,ca
3.e	potential negative environmental and social impacts of re development projects				*3.e-1				
		3.e.1	public education programs	convene public discussion workshops	*3.e-1	developers, utilities, government agencies	d,ki,m,h,n,r,ke,z		p,i,krl,w,heco,ers,ca
	4. form of price offered to renewable developers may not facilitate financing				4-2				
4.a	tying the value of, and payments for, re generated electricity directly to the price of oil.				4.a-1				
		4.a.1	continuing/modifying min. rates for as available re resources	ppa negotiations	4.a-3	puc, utilities, developers	heco,ke,d,r,ki,m,h,n,z	w	p,i,krl,ers,ca

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
		4.a.2	fixed or more predictable payment streams	ppa negotiations	4.a-5	puc, utilities, developers	d,r,p,i,krl,w,n,ers,z	heco,ke	ki,m,h,ca
		4.a.3	apply adders to filed avoided energy costs	see appendix x	4.a-6	see appendix B	d,p,w,krl,i,r,ers,z	heco,ke	ki,m,h,n,ca
4.b	high initial cost of re projects				4.b-1				
		4.b.1	use of tax credits that reduce initial costs of re projects	legislation	4.b-2	legislature, developers	heco,ke,d,p,ki,h,krl,i,n,r,ers,z		m,w,ca
		4.b.2	use of special purpose revenue bonds that reduce financing costs	legislation	4.b-3	legislature, developers	heco,ke,d,p,krl,i,ki,m,h,n,r,ers,z		w,ca
		4.b.3	consider front end loaded prices if adequate security is available	ppa negotiations	4.b-4	puc, utilities, developers	heco,ke,d,p,krl,i,ki,m,h,n,r,ers,z		w,ca
		4.b.4	consider the demonstrable life of the underlying asset of the re project in determining ppa term	ppa negotiations	4.b-6	puc, utilities, developers	heco,p,krl,i,ke,d,w,n,r,ers,z		m,h,ki,ca
	5. new renewables are not included in utility resource plans.				5-2				
5.a	long term reliability of the renewable energy technology				5.a-1				
		5.a.1	monitor ongoing re developments	monitor ongoing re demonstration projects	5.a-1	utilities, developer, government agencies	heco,ke,d,r,ki,m,h,n,ca,z		p,i,krl,ers,w
		5.a.2	actively participate in re demonstration projects applicable to hawaii	utilities to use portion of rd&d funds	5.a-3	utilities, puc, developers, government, third party investors	heco,ke,d,r,ki,m,h,n,ca,z		p,i,krl,ers,w
5.b	lack of incentives to utility to purchase re				5.b-1				
		5.b.1	develop standard offer contract for re sales to utilities	puc docket to consider standard offer contract	5.b-2	puc	ke,d,r,p,ki,m,h,w,n,krl,i,ers,z	heco	ca
		5.b.2	require payment of capacity and energy values to re producers	see 1.c.2	5.b-4	puc, utilities, developers	d,r,p,ki,m,h,w,n,krl,i,ers,ke,z	heco	ca
5.c	lack of incentives to utilities sufficient to overcome the risk of producing re				5.c-1				
		5.c.1	consider incentives to utility shareholders for investing in rd&d projects	heco to work with ca and others to develop a proposal	5.c-2	utilities,ca	d,r,ki,m,h,n,z	w	heco,p,i,krl,ke,ca,ers
		5.c.2	consider utility investment in joint ventures for renewable projects	puc and ca to provide guidance	5.c-3	puc, ca	heco,ke,d,r,p,ki,m,h,w,n,krl,i,ers,z		ca

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
5.d	lack of equal transmission access to independent power producers and wholesale and retail wheeling			see barrier grouping 7	5.d-1	see barrier grouping 7			
5.e	inadequate evaluation and treatment of re and ipps in irp process				5.e-1				
		5.e.1	consider quotas, set-asides, or targets	legislation, puc rule, irp process	5.e-2	legislature, puc	d,p,kd,n,krl,i,ers,r,ca,z	heco,ke	m,w,h
		5.e.2	consider preferential consideration of renewables in irp process	legislation, puc rule, irp process	5.e-3	puc, legislature	d,r,p,ki,n,krl,i,ers,z	heco,ke	h,w,m,ca
		5.e.3	consider competitive bidding	puc docket	5.e-4	puc	d,p,ki,m,h,n,krl,i,ers,r,ca	heco,ke,z	w
		5.e.4	consider retail wheeling	see barrier grouping 7	5.e-5	see barrier grouping 7	d,w,p,i,krl,n,ki,h,m,r,z,ers	heco,ke	ca
5.f	evaluation and consideration of beneficial impacts of re use relative to conventional fossil fuels				5.f-1				
		5.f.1.	improve methodologies to value benefits of renewables	irp process	5.f-3	utilities, puc, irp advisory groups	ke,d,p,ki,m,h,w,n,krl,i,heco,r,ers,ca,z		
		5.f.2	proceed with quantification of externalities	heco utilities action plan	5.f-4	heco utilities, externalities advisory group, puc	heco,ke,d,ki,m,h,w,ca,z,r		p,n,krl,i,ers
		5.f.3	establish green rfps	green rfp	5.f-5	puc	d,r,p,ki,n,krl,i,ers,z	heco,ke	h,w,m,ca
		5.f.4	establish renewable set asides	establishment of set asides for renewables in irp	5.f-6	puc	d,r,p,ki,n,krl,i,ers,z	heco, ke	w,m,ca,h
		5.f.5	consideration of competitive bidding	puc generic docket on competition in electric industry	5.f-7	puc	d,p,ki,m,h,n,krl,i,ers,r,ca	heco,ke,z	w
5.g	lack of adequate, high quality, renewable resource data				5.g-1				
		5.g.1	consider funding additional copies of dbedt renewable energy resource assessment report	budget	5.g-2	dbedt	heco,ke,d,r,ki,m,h,n,z		p,w,krl,i,ers,ca
		5.g.2	utilities and developers assume greater monetary role in resource assessment	increased private sector funding	5.g-3	dbedt, developers, utilities	d,r,ki,m,h,n,z		heco,ke,w,p,krl,i,w,ers,ca
	6. lengthy ppa negotiations				6-1				
6.a	lack of incentives to utilities to purchase re			see barrier 5.b	6.a-1	see barrier 5.b			

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
6.b	implementation of existing statutes and regulations				6.b-1				
		6.b.1	puc to implement provisions of scr 2(1994)	puc rulemaking	6.b-3	puc	d,r,w,n	heco,ke	ki,m,h,ca,p,i,krl,ers
		6.b.2	puc to enforce current rule (6-74-15c)	puc action enforcing existing rules	6.b-4	puc	d,r,p,w,n,krl,i,ers	heco,ke	ki,m,h,ca
		6.b.3	puc implement requirements of act 176 (1994)	puc enforcement of existing law	6.b-5	puc	d,r,w,n	heco,ke	ki,m,h,ca,p,i,krl,ers
6.c	protracted time to negotiate with re developers				6.c-1				
		6.c.1	initiate rulemaking proceedings to adopt rules to enforce mandates	puc rulemaking	6.c-1	puc	r,p,w,n,krl,i,ers,z	heco,ke	ki,m,h,d,ca
		6.c.2	streamline regulatory approval process for re ppas	puc rulemaking	6.c-2	puc	r,p,w,n,krl,i,ers,z	heco	ki,m,h,d,ca,ke
		6.c.3	enforce current rules regarding negotiations between utilities and qfs	puc enforcement of existing rules	6.c-3	puc	d,r,p,h,w,n,krl,i,ers,z	heco,ke	ki,m,ca
		6.c.4	initiate rulemaking pursuant to scr no. 2	puc rulemaking	6.c-3	puc	d,r,p,w,n,krl,i,ers,z	heco,ke	ki,d,h,ca,m
		6.c.5	utilize services of a hearing officer	employment of hearing officer	6.c-4	puc	d,r,p,m,w,n,krl,i,ers,z	heco,ke	h,ki,m,ca
		6.c.6	implement requirements of act 176	puc enforcement of existing law	6.c-5	puc	d,r,p,w,n,krl,i,ers,z	heco,ke	ki,m,h,ca
		6.c.7	rulemaking to require a d&o within 60 days of complaint filed	puc rulemaking or legislation	6.c-5	puc, legislature	r,p,w,n,krl,i,ers,z	heco,ke	ki,d,h,ca,m
		6.c.8	expedite contracting process	utilities enacting the strategy	6.c-6	utilities	d,r,p,ki,m,h,w,n,krl,i,ers,z	heco,ke	ca
		6.c.9	standard offer contracts for re sales to utilities	puc rulemaking	6.c-7	puc	ke,d,r,p,ki,m,h,w,n,krl,i,ers	heco,z	ca
		6.c.10	reduce uncertainty regarding determination of avoided costs	see strategy 1.c.1	6.c-7	puc	heco,ke,d,p,ki,m,h,w,n,krl,i,ers,r,ca		
	7. electric utility regulatory structure								
7.a	absence of re specific retail wheeling mechanisms or opportunities				7.a-1				
		7.a.1	include in the framing of the electric utilities competition docket specific issues relating to providing renewable access	puc electric utilities competition docket	7.a-2	puc	d,p,w,n,krl,i,h,m,ki,ers,r,z		heco,ke,ca
		7.a.2	allow re nugs to transmit and distribute re to customers willing to pay	puc docket or rulemaking	7.a-3	puc	d,r,p,w,n,krl,i,z,ers	heco,ke	ca,m,ki,h

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
		7.a.3	permit county governments to engage in re retail wheeling	see strategy 1.b.6	7.a-4	puc, utilities, ca counties	d,p,ki,m,h,w,n,krl,i,ers, r,z	heco,ke	ca
	8. environmental and social impacts				8-2				
8.a	potential negative social and environmental impacts				8.a-1				
		8.a.1	negative impacts should be taken into consideration in siting	siting, permitting, irp process	8.a-2	utilities, developers, puc, permitting agencies	heco,ke,d,ki,m,h,n,ca, r,z		p,krl,i,w,ers
		8.a.2	mitigate negative impacts	project design, permitting, irp process	8.a-3	utilities, developers, puc, permitting agencies	heco,ke,d,ki,m,h,n,z,r, ca		p,krl,i,w,ers
		8.a.3	avoided impacts of re projects should be considered	permitting, irp process	8.a-4	puc, permitting agencies	d,ki,m,h,n,ca,r,z		heco, ke,p,krl,i,w,ers
	9. status of development of certain renewable and storage technologies				9-2				
9.a	limited federal and state funds for re demonstration projects				9.a-1				
		9.a.1	conduct pilot rd&d projects by utilities	heco to use portion of rd&d funds to develop and implement pilot demonstration projects	9.a-2	utilities	heco,ke,d,ki,m,h,n,r, ca,z		p,i,krl,w,ers
		9.a.2	consider safe harbors for demonstration projects	safe harbor cost recovery guidance	9.a-3	puc guidance	d,p,ki,m,h,n,krl,i,ers,z,r		heco,ke,w,ca
		9.a.3	implement a green pricing pilot fund for re rd&d projects	see strategy 1.b.5 and 1.e.2	9.a-5	utilities, puc, advisory group	ke,d,r,p,ki,m,h,n,krl,i, heco,ers,z,ca	w	
9.b	long term reliability of technology				9.b-1				
		9.b.1	monitor ongoing re demonstration projects	monitor ongoing re demonstration projects	9.b-3	utilities, dbedt, pichtr	heco,ke,d,ki,m,h,n,z,r, ca		p,krl,i,w,ers
		9.b.2	actively participate in re demonstration projects	re pilot rd&d demonstration projects	9.b-4	utilities	heco,ke,d,ki,m,h,n,r, ca,z		p,krl,i,w,ers
9.c.	technical maturity of re resource				9.c-1				

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	barrier		strategy	vehicle	page	agency	agree	disagree	no position
		9.c.1	monitor and/or conduct re demonstration projects	see strategy 9.b.1,2	9.c-5	utilities, dbedt, pichtr	heco,ke,d,r,ki,m,h,n,ca,z		p,krl,i,w,ers
		9.c.2	conduct irp supply-side studies	conduct irp supply-side studies	9.c-5	utilities, developers, dbedt	heco,ke,d,r,ki,m,h,n,ca,z		p,krl,i,w,ers
		9.c.3	conduct pilot rd&d projects by utilities		9.c-7	utilities	heco,ke,d,r,ki,m,h,n,ca,z		p,krl,i,w,ers
		9.c.4	consider safe harbors for re demonstration projects	see 9.a.2	9.c.7	puc guidance	d,r,p,krl,ki,m,h,n,i,ers,z		ke,heco,w,ca
		9.c.5	implement a green pricing pilot fund for re rd&d projects	see 9.a.3	9.c-7	utilities, puc, advisory group	heco,ke,d,r,p,ki,m,h,n,krl,i,ca,ers,z	w	
	10. segmented governmental commitment to re				10-2				
10.a	conflicting objectives of, and lack of coordinating between various government agencies and departments regarding formulation and implementation of energy policy				10.a-1				
		10.a.1	director of dbedt should assert his role as energy resources coordinator	dbedt action	10.a-2	dbedt	d,r,ki,m,h,n,z		ke,heco,p,i,krl,w,ers,ca
		10.a.2	convene workshop of affected agencies to resolve conflicts, streamline etc.	workshop	10.a-3	dbedt, osp	d,ki,m,h,n,z,r		ke,heco,p,i,krl,w,ers,ca
		10.a.3	administration or legislature should establish clearly stated re and diversification goals	legislation	10.a-4	legislature, administration	d,r,ki,m,h,n,z	heco	ke,p,i,krl,w,ers,ca
		10.a.4	set-asides or procurement targets for re	legislation, executive order	10.a-5	legislature, administration	d,r,p,ki,krl,i,ers,z	heco,ke	m,w,h,ca
10.b	fragmentation of state efforts and overlap of various organizations with respect to re				10.b-1				
		10.b.1	energy resources coordinator take the lead in coordinating state efforts	organizational analysis of state funded re rd&d organizations	10.b-2	dbedt with approval of governor and legislature	d,kd,m,h,n,z		heco,ke,p,krl,i,w,ers,r,ca
		10.b.2	analysis of restructuring of involved agencies	organizational analysis of state funded re rd&d organizations	10.b-2	dbedt with approval of governor and legislature	d,kd,m,n,z		heco,ke,p,krl,i,h,w,ca,ers,r

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barrier		strategy	vehicle	page	agency	agree	disagree	no position
	10.b.3	utilities, developers and state should jointly support research	cost-shared research	10.b-2	dbedt, developers, utilities, pichtr, uh, nelha, federal agencies	heco,ke,d,ki,m,h,z,r		p,krl,i,w,n,ca,ers

PARTIES:

CA-CONSUMER ADVOCATE
D-DBEDT
ERS-ENERGY RESOURCES
H-HAWAII COUNTY
HECO-HECO, MECO, HELCO
H-INTERISLAND SOLAR
KI-KAUAI COUNTY
KRL-KAHUA RANCH
M-MAUI COUNTY
P-PICHTR
R-DAVID REZACHEK
W-WAIMANA
Z-ZOND

OTHER ENTITIES:

DLNR-DEPARTMENT OF LAND AND NATURAL RESOURCES
EPRI-ELECTRIC POWER RESEARCH INSTITUTE
HSEA-HAWAII SOLAR ENERGY ASSOCIATION
NELHA-NATURAL ENERGY LABORATORY OF HAWAII
AUTHORITY
NREL-NATIONAL RENEWABLE ENERGY LABORATORY
OSP-OFFICE OF STATE PLANNING
OTEC-OCEAN THERMAL ENERGY CONVERSION PROJECT